

*V. sororia*. Apparently my troublesome plant is a cross between these two species, both of which were growing in the immediate vicinity.

The same hybrid was found when in flower last spring in two other stations, associated with the parents. In both cases plants were transferred to the garden, and developed characters during the autumn that are in perfect accord with their supposed origin.

I have gone, somewhat tediously I fear, into these details of personal experience, as I have felt that I could in no other way adequately present the great mass of circumstantial evidence that to my mind establishes the theory of occasional hybridism in this group of plants. And this evidence, as the instances increase in number, has a cumulative force. A single instance of a plant nearly sterile and quite intermediate between two associated species might not bring conviction as to its hybrid origin. But when forty or more such cases are observed, always under similar circumstances, the evidence has a logical force well nigh irresistible.

Along the southern New England coast and farther south are found at least six other species of *Viola* in the same group with the five under discussion. Are these six species equally guilty of hybridism with each other, and with any of the five here discussed with which they may chance to associate? This is a question so grave and so complicated as to require a separate paper for its discussion.

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EXPLANATION OF PLATE 58.—*Viola fimbriatula*  $\times$  *septentrionalis*: *a*, autumnal state showing open capsule with seven seeds and numerous aborted ovules. *V. fimbriatula*, J. E. Smith: *b*, leaf; *c*, mature capsule; *d*, same open, showing normal number of seeds. *V. septentrionalis*, Greene: *e*, leaf; *f*, mature capsule; *g*, same open, showing normal number of seeds.

## A NEW SPECIES OF BLACKBERRY.

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I WISH to report a new blackberry which I think is sufficiently common and wide-spread, as well as constant in its characteristics, to merit a name and take its place with the five or six best marked North American species. Probably every botanist in New England



can find it on his or her own botanizing ground, for I have found it abundant or common in five of the New England states which I have visited. From the common high blackberry (*Rubus nigrobaccus*, Bailey) it is readily distinguished by the entire absence of glandular pubescence. It belongs to a group of forms hitherto generally referred to *R. argutus*, Link, and *R. Randii*, Bailey. The type of the former of these species is still preserved in the Royal Botanical Museum at Berlin, and I have been able to examine an excellent tracing of it, now in the Gray Herbarium. It has decidedly narrower leaflets which are cuneate or obtusely pointed at the base but not in the least cordate. In *R. Randii*, likewise, the leaflets are narrower than in the plant here described and not at all cordate. *R. Randii* is furthermore a much weaker plant scarcely or not at all armed, and has a small flower and a small, dry, and seedy fruit. The type specimen is now in the Gray Herbarium.

The new species is readily distinguishable by its broad, thin pubescent leaves, by its nearly round stem from two to four feet high, the canes very often bending over as in the Black Raspberry, and by a noticeable resemblance to the common running blackberry, *R. villosus*, Ait. It may be named and characterized as follows: —

***R. recurvans***, n. sp. Plant softly and copiously pubescent but wholly destitute of glandular hairs of any kind.

*New canes.* Stem glabrous, reddish on the upper side, nearly cylindrical or with five rounded or rarely furrowed faces. Prickles set in lines over the angles of the pentagonal pith, straight with a slight backward slant, rather strong, one eighth inch long above the enlarged basal part, about five to an inch of stem but varying considerably in number and strength. Leaves large (sometimes ten inches broad), all 3-foliolate or the upper often 5-foliolate. Leaflets nearly smooth above with thick straight pubescence beneath, yellowish green, coarsely and doubly serrate-dentate, generally thin; the middle one broadly ovate taper-pointed, about three-fourths as wide as long cordate or subcordate, its stalk an inch in length; side leaflets oval, cuneate at each end and nearly twice as long as wide, their stalks one fourth inch long; basal leaflets oval, twice as long as wide, wedge-shaped at each end, sessile. Petioles furrowed and glabrous, the petiolules pubescent, both armed with hooked prickles.

*Old canes.* More or less densely pubescent on all parts, except the upper surface of the leaves; some parts nearly woolly. Leaves more deeply and sharply serrate-dentate than those of the new canes and of a lighter yellowish green. Stem nearly round with prickles intact, the main axis dying back to a considerable extent during the winter. Secondary growth polymorphous and difficult to describe, —



leaf-branches, leafy inflorescences and naked inflorescences occurring on all parts of the main axis and often all three kinds growing from the same old-leaf axil, the leaves often all unifoliate and of all sizes and shapes. Flowers rather showy, one and one-eighth inches broad. Petals noticeably broad, one-half inch long, one-fourth to five-sixteenths of an inch wide, white. The most noticeable form of fruiting branch about six inches long, with one trifoliate leaf, and one or two oval unifoliate leaves subtending the rather closely-bunched four to six fruits. Fruit of medium size, cylindrical about one-half inch high and rather longer than thick, maturing *very early*. Drupelets larger than those of *R. nigrobaccus*, Bailey, black, pulpy, sweet, but lacking the aromatic taste characteristic of *R. nigrobaccus*.

Growing chiefly in open sunny places and ranging widely over the New England States, being frequent as observed by the writer in Southern Vermont, Southern New Hampshire, Western Massachusetts, Southwestern Maine, and Central Connecticut. As examples collected by others may be cited the plant of Mr. M. L. Fernald, collected at Gilsum, New Hampshire, July 23, 1899, no. 22 (hb. Gray), and plants in the herbariums of Messrs. Luman Andrews and C. H. Bissell collected in 1903 at Southington, Connecticut; also of Pres. E. Brainard collected at Middlebury, Vermont. The range is likely to extend north, west and perhaps south.

This blackberry is frequently erect with canes sometimes five feet high and seven or eight feet long and a half inch in diameter at the base, being two to four feet high generally, but it is more often rather straggling, with the canes recurving and prolonged on the ground when they frequently tip. The new canes considerably overtop and often hide from view the fruiting ones, which on small plants are close to the ground. The species often bears a fine crop of berries but they are so early that they are overlooked, since they are nearly gone when most of our species are at their best.

I have watched the species for several years over a wide range and find it easy to recognize. I have, it is true, found a few plants which deviate somewhat from the above description, though they probably belong to this species. Some of them are glabrous with thin leaves, others glabrous with thick leaves, the former having long, slender, recurving stems, generally tipping.

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